**Plant Operations Notebook, N-92-04-22**

This notebook covers the period April 1892 and possibly July 1892. It was used by Walter S. Mallory and Edison for notes regarding screening tests. The spine is labeled "132." The book contains 35 numbered pages. Two loose pages have been inserted into the book.

Blank pages not filmed: 28-29, 34-35.

×E-172 N-92-04-22

W. T. Mallory

①

Test capacity screen 4/22 92

No 1 screen - test to see if can increase capacity without much extra wear

Test 1 -
took bag under full width one section - 1 plate (3 parts) with old brushes - no weights as run regular -
Result 1 minute 4# net

Test 2 -
one section - with brushed weighted about 5# extra - run for one half hour steady with brushed on before test made - result 1 minute 8# net

#3 – One section – Same brush + weight – 1/2 minute one 1/2 off run 20 minutes as above
result 1 minute 7# net

4 – one section – same brush + weight 1/4 minute one 3/4 off – run 20 minutes
result 1 minute 6# net

5 – One section – Same brush weight 7 1/2# extra (total 9 1/2# with brush) 1/6 minute on 5/6 minute off – run 20 minutes –
result 1 minute 6# net

6 – One section – 7½ # weights
10 minutes – 1/4 minute on
3/4 off – 1 minute 6½ # net

4 – One section – 5 # weights
10 minutes 5 seconds on
15 off – 7# 1 minute net

8 – One section 5# weights
run 5 minutes steady
with weight on – test
1 minute weight on all
time 1 minute 7½ # net

(7)

9 - Sancerre test #1

3 3/4 # net

Morstene 75 ~~[illegible]~~ &

Them 5 ~~[illegible]~~ 96

(9)

April 23 92

Test on concentrates from
no 2 stock house to
see if by returning
can increase % iron
by lowering Amphere

Test 1 -
Regular concentrates
15 Amphere -
Con 70.95 Tails 50.68

Test 2
Same
12 Amp Tails 57.92
70.95

Test 3

Same

9 Amps

Con 71.31 - Tails 69.86

Test 4

Same

6 Amps

Would not carry over the ore to back of machine current too light

(13)

Same test with
ore warm temp 200

Test 5
15 amps
Con 71.12
Tail 60.09

temp 200

Test ~~AFO~~ 6 -
Con 71.31
Tail 68.05

12 amps.

Test 7 - temp 200
9 - amps

Con 71.67
Tail 68.78

4/25

Concentrates taken from No 1 Stock house #14 mesh and run through belt separator — ~~fast~~ give 63.71 %

then run ~~100~~ 100 mesh through belt separator at 9 amps — + then washed sample + took to Mr E at Orange

130
15
260
130
1560
60
2240 | 9360.0 (42
8960
4000

28 apl 92

old brushes - everything same except increased speed from 15 to 21 Revolutions - output at same section Mallory link all his - 1 minute 10 lbs =

previously about 18 inches screened with increased speed .36 inches of surface screened —

Here 69

Bucking July 7-92

1st test.

900# ore - 35# mix -

run mixer 4 minutes - furnace

2 hours -

results

after coming from furnace - not very

hard -

next morning surface hard some

soft in center - 1 layer on car

---

2 -

900 ore 35 mix

4 minutes - furnace 1½ hrs

these were better bricks as

first lot (No 1 -) was made

with pug mill not full -

Results - harder - when same from

1 layer on car

furnace —
next morning quite hard all
the way through.

No 3 —
1100# ore 40 mix

4 minutes — furnace 1 hour
Results — quite hard when
came from furnace —
next morning — not as hard
as No #2 ~~[illegible]~~ as hard as
surface but not as hard in
center as No #2 —



after various tests settled
down to 35# mix to about
1000# ore — with great
pressure — made very good
& hard brick

Smaller brick

~~test~~ 17½# to 500 — with
great pressure — in furnace
7^45 out 8^25

~~Weight~~

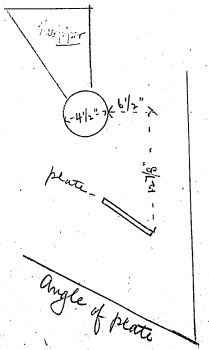
test 15# mix to 500
great pressure in
furnace 845 - out 9 45.

test 12½# mix to 600
great pressure in
furnace 9 45 to 10 45



Test on new screen made by
Mr Edison - commencing July
22nd : 1892

July 26th




All 90 made with little box, on to quantity the material will mixed - + 30 mesh round screen used

Test 1 — feed roller — 5 rev. with 1/4" feed —

Concentrates — coarse 5%
fine 95%

Same as to quantity as

Concentrates # 20%
Rejections # 80%

Re-concentration of the above

Concentrates — coarse 10%
fine 90%

As to quantity

Concentrates # 22%
Rejections # 78%



Test #2 — board (blanks) 10" lower from center feed roll — 1/4" feed — 6 rev.

Concentrates coarse 11%
fine 89%

Rejections coarse 65%
fine 35%

Quantity concentrates 34# net 27%
rejections 89# / 123# 73%

Test #3 — Same conditions as No #'s except 1/2" feed

Concentrates coarse 10%
fine 90%

Rejections coarse 67%
fine 33%

Crude head 53% of 30 mesh

Quantity concentrates 24# net 31%
rejections 44# / 68# 69%

Test 4. Same conditions as
[illegible] 1½" feed 11 rev.

concentrates fine 90%
coarse 10%

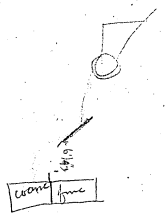
rejections

quantity 68# net rejections 85%
13# " concentrates 15%

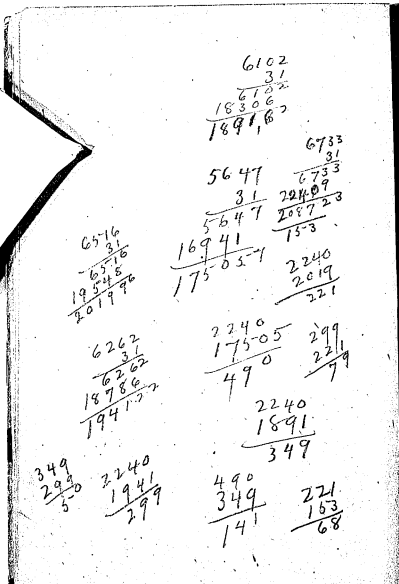
In repeating test #3
we did not get as good
results — + found we had
not taken distance of
top of parting board



from bottom of plate - after
experiments found 10% coarse
at 6¼" see sketch




subsequent experiments show
distance as above is somewhere
between 6" + 9"



6102
31
6102
18306
1891,62

6733
31
6733
22409
208723
153

5647
31
5647
16941
175057

6516
31
6516
19548
201996

2240
2019
221

6262
31
6262
18786
194122

2240
175-05
490

299
221
79

2240
1891
349

349
299
50

2240
1941
299

490
349
141

221
153
68



First Run

Tails .724 %
Conc 56.47 %

This leaves 490 lbs tails to ton

2nd Run

Tails 3.99 %
Conc 61.02

141 lbs taken out
349 lbs left in

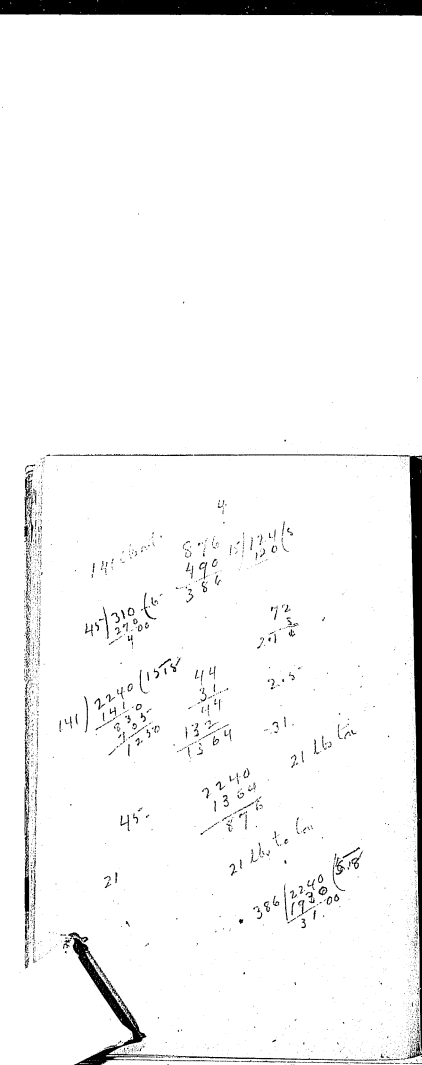
3rd Run

Tails 9.55
Conc 62.62

50 lbs taken out
299 left in

4th Run 79 lbs taken out Tails 18.82 %
221 left in Conc 65-16

5th 68 lbs out Tails 28.96
153 in Conc 67 33





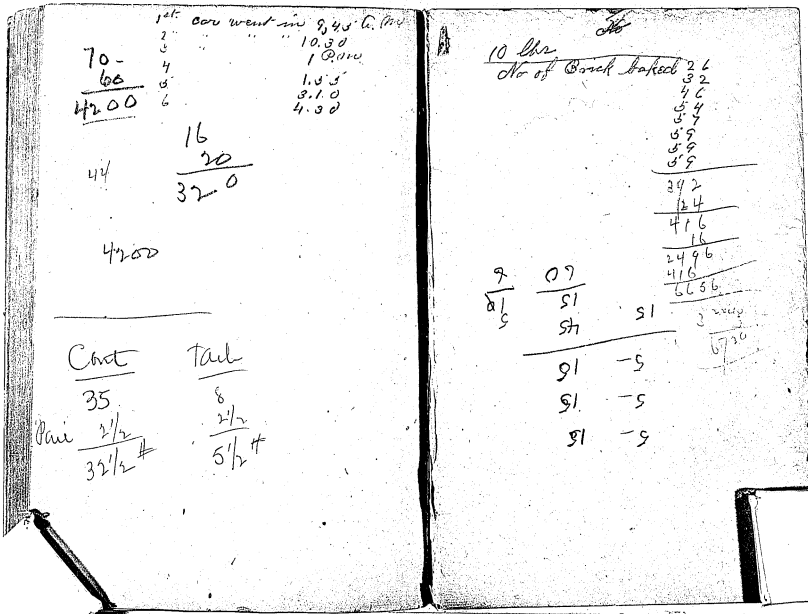
assuming original head
44- then there were
876 lbs tails in one -
1st Run took 386 lbs out Loss
.72 or loss of say 3 lbs per ton
2nd took out 141 lbs tails &
Loss 3.99. Loss was 8 lbs -

3rd Loss 7 lbs

4th 22 lbs

5th

27
31 / 67 ( 2.16
62
50
31
190
186



1st car went in 9.45 A.M.
2 " " " 10.30
3 " 1 P.M.
4 1.55
5 3.10
6 4.30

70
60
4200

16
20
320

44

4200

| Cost | Tail |
|---|---|
| 35 | 8 |
| Pair 2½ | 2½ |
| 32½ # | 5½ # |

10 lbs
No of Brick baked

26
32
46
54
57
59
59
59
392
124
416
16
2496
416
6656

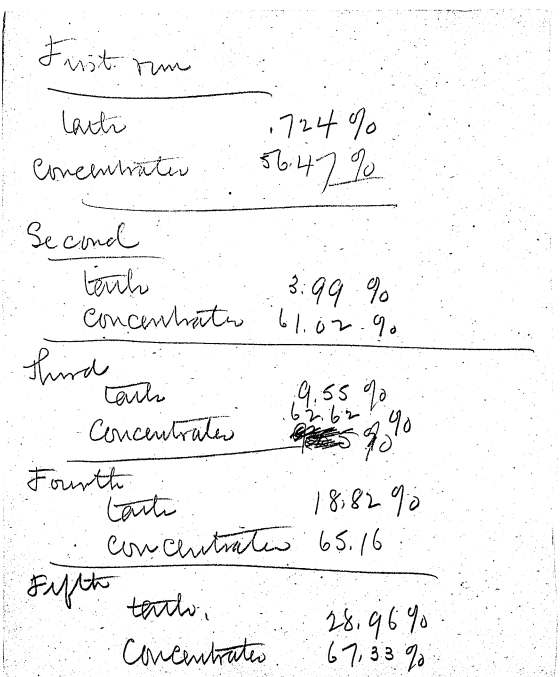
9
81
9

07
51
51

51 — 5
51 — 5
51 — 5

3 [illegible]
6720

[ITEM FOUND IN BOOK]



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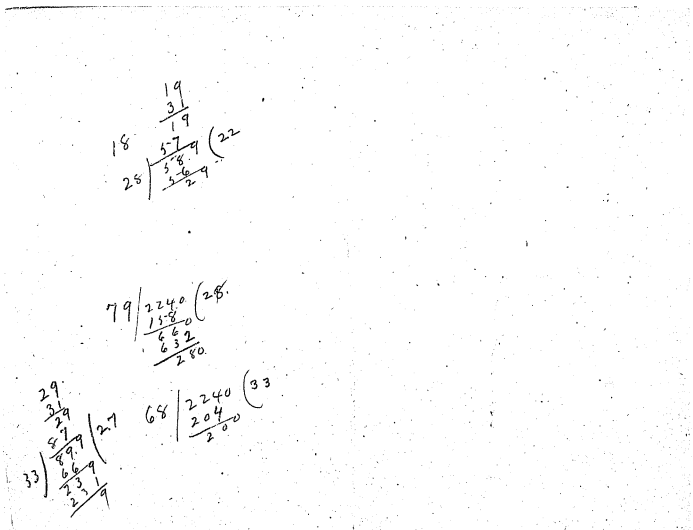
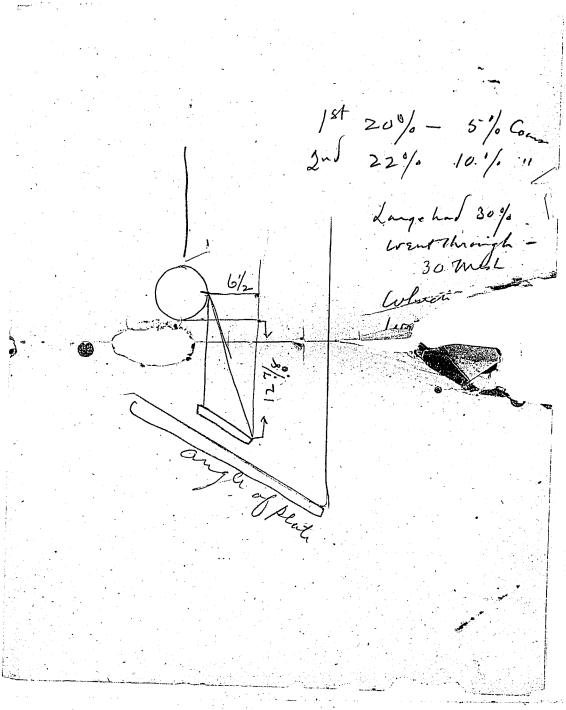
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